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AMBULATORY PATIENT MEDICAL RECORDS SYSTEM PILOT PROJECT

A study of the utility of selected improvement actions
and system changes in general at Brooke Army Medical
Center, Fort Sam Houston, TX, and Ireland Army Hospital,
Fort Knox, KY

Wayne R. Gallentine, DAC
Management Analyst
Health Care Studies Division
Academy of Health Sciences, United States Army
Fort Sam Houston, TX 78234

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Final Report

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Management Analyst

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The study purpose was to develop recommendations which would be widely applicable for inclusion in Army ambulatory patient medical records systems. Methodology for recommendation development consisted of implementing and evaluating thirteen improvement actions at two pilot study test sites. Test sites selected were Brooke Army Medical Center, Fort Sam Houston, Texas, and Ireland Army Hospital, Fort Knox, Kentucky. Neither test site fully implemented all thirteen improvement actions. Therefore, ultimate analysis for

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recommendation development consisted of measuring the effectiveness of four and observing the effectiveness of five of the total thirteen improvement actions. Study recommendations are that all Army medical treatment facilities be required to: utilize a color coded charge-out folder system and the embossed patient identification card; establish (full or part-time) the medical records suspense and locator clerk; and comply with the policy of distributing one copy of the three part laboratory form directly to the records room. It is also recommended that each medical treatment facility consider: systematic evaluation of staffing requirements; the establishment of a universal medical records system messenger; implementation of inservice training; assessment of environmental changes; and the use of management indicators to monitor the effectiveness of the medical records system.

SUMMARY

The purpose of this study was to develop recommendations for implementation of actions designed to improve the ambulatory patient medical records systems in all Army medical treatment facilities.

Recommendations were developed on the basis of measurements and observations of effectiveness of thirteen improvement actions designed to be implemented in the outpatient medical records sections at two pilot study test site medical treatment facilities.

Pilot study test sites selected were: Brooke Army Medical Center (BAMC), Fort Sam Houston, Texas, a teaching hospital with an average monthly outpatient workload of 55,000; and Ireland Army Hospital (IAH), Fort Knox, Kentucky, a non-teaching hospital with an average monthly outpatient workload of 51,000.

Baseline data to determine criteria for management indicators was collected at both pilot study test sites during the 2d Quarter, FY 73. Pilot study sites were notified concerning baseline data and provided with recommendations concerning the thirteen improvement actions to be implemented.

Study findings indicate that BAMC fully implemented 7 of 13 improvement actions, completely implemented but discontinued one other improvement action, partially implemented three improvement actions, and did not implement the two remaining improvement actions. IAH completely implemented 9 of 13 improvement actions, partially implemented two additional improvement actions, and did not implement the remaining two improvement actions.

Four conclusions based on factual findings are: one, that the utilization of the color coded charge-out folder system results in the overdue medical records being readily identifiable; two, that the medical records suspense and locator clerks contribute to a reduction in the number of overdue records; three, the use of the embossed patient card system results in a decrease in unidentifiable reports; and four, sending one copy of the three part laboratory form directly to the records room greatly enhances its chances of being filed.

Five conclusions based upon observation and opinion are as follows: one, the baseline analysis and computations of tasks and personnel staffing are useful and informative; two, the medical records system messenger assures prompt delivery of records and diagnostic reports; three, inservice training results in increased job satisfaction and efficiency; four, work area environmental improvements result in improved job satisfaction and efficiency, and five, the study management indicators are useful tools for management.

Recommendations of the study are that all Army medical treatment

facilities be required to implement a color coded charge-out folder system, utilize the medical records suspense and locator clerk system, and initiate and utilize the embossed patient identification card. It is further recommended that each Army Medical Treatment facility be required to review distribution of the three-part laboratory form to insure that one copy is sent to the originator (requestor), one copy is placed in the laboratory files, and one copy is forwarded to the records room to be retained in the medical record. Finally, it is recommended that all Army medical treatment facilities consider: one, evaluating the numbers of personnel required to support an ambulatory patient medical records system using APC Model #5; two, establishing a universal medical records system messenger; three, providing an inservice training program using APC Model #4 for guidance; four, environmental improvements including sufficient aisle space; and five, utilizing the management indicators to measure the status of, or changes in, the ambulatory patient medical records system.

PREFACE

It should be noted that numerous adversities plagued this study from its inception. It was the intent of the study to implement an individual improvement action and then to measure the effectiveness of that action by use of the management indicators after a one or two month period. This system was to have been repeated for each improvement action on a regularly scheduled basis.

Such being the case, command support and complete cooperation by the study hospitals was essential. Also required was full time and attention by the project officer and his working staff.

A variety of circumstances precluded complete achievement of any of these prerequisites. Command support was interrupted by the transfer of responsibility in 1973 from the Office of the Surgeon General to the newly organized Headquarters, Health Service Command. The study hospitals were not sufficiently oriented, advised, or prepared to implement the improvement actions as scheduled. The project officer never had the opportunity to organize a working staff as he was reassigned in March of 1973. Four months passed before the assignment of a new, inexperienced project officer.

Manpower and budgetary constraints in 1974 and 1975 by Headquarters, Health Services Command, on the study hospitals, limited a large portion of the study effort. A military services travel moritorium also restricted the efforts of the project officer. Details of the obstacles involved are included in paragraph 5.1 under "Discussion".

Consideration was given in 1974 to abandon the study, but it was decided to continue, and extract as much information as possible within the limited scope.

The information presented in this report therefore addresses ways of identifying some problem areas without presenting validated solutions. In other areas improvement actions have been validly demonstrated. Overall this report should be of interest and utility to anyone faced with the day-to-day management of outpatient medical records.

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ACKNOWLEDGEMENTS

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1.2 <u>Background</u>.

1.2.1 History of the Problem.

The principle followed by the Joint Commission on the Accreditation of Hospitals is that: "The hospital shall maintain such facilities and services as are adequate to provide medical records that are accurately documented, readily accessible, and can easily be used for retrieving and compiling information."[1]

A previous study of military medical treatment facilities confirms the existence of a widespread, serious problem in the management and maintenance of ambulatory patient medical records. This Department of Defense (DOD) contract study, performed in 1970 by Westinghouse Electric Corporation, reported: "Although the administration of medical and health records for service personnel, dependents, and retirees is one of the most important activities in the medical health care system, it is also one of the weakest. At almost every level of health recording, numerous delays and errors are not only possible, but predictable and tolerated."[2]

While the DOD study addressed all "military" medical treatment facilities in general, other studies have confirmed medical records system problems pertaining only to Army medical treatment facilities. As an example, three seperate Army studies, performed in 1972, revealed the following.

(a) At DeWitt Army Hospital, Fort Belvoir, Virginia, the availability of medical records in the military sick call clinic ranged from a high of 95 percent to a low of 25 percent.[3]

(b) At Darnall Army Hospital, Fort Hood, Texas, a study revealed: "Prompt filing of reports in the Outpatient Records presents the most acute problem and is due to illegible requests, errors in name, social security numbers, and a four week filing backlog."[4]

(c) A Comptroller of the Army (COA) study of 10 Army hospitals indicated "poor handling of records" was the most common cause of patient dissatisfaction with our system of ambulatory health care delivery, and the third ranking irritant with hospital staff members.[5]

1.2.2 History of the Study.

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In July of 1972 an Army Multi-Directorate Health Care Advisory Board in the Office of the Surgeon General (OTSG) approved a list of actions designed to improve the ambulatory patient medical records system. It was determined that these actions would be implemented on a pilot study basis at one medical center (teaching hospital) and one US Army non-teaching hospital.

The study was scheduled to commence in September of 1972 and terminate 31 August 1974. Subsequently, an extension of the termination date to 31 August 1975 was granted.

2. OBJECTIVES.

The objectives of the study, designed to determine the success (or lack thereof) of improvement actions at the pilot study test sites, were established as follows:

(a) To identify the personnel required, as well as the organizational structure and the training necessary, to support an ambulatory patient medical records system.

(b) To delineate operational procedures to be used in identifying, filing, retrieving, transmitting, and controlling ambulatory patient medical records.

(c) To measure the effectiveness of periodic medical audits of ambulatory patient medical records.

(d) To suggest environmental improvements for areas where ambulatory patient medical records are maintained.

(e) To define the management indicators that are useful in measuring effectiveness in overall evaluation of the ambulatory patient medical records system.

3. METHODOLOGY.

3.1 Overview.

3.1.1 Scope of the Study.

3.1.1.1 Although this study addresses the ambulatory patient medical records as an overall system, it must be recognized that the phrase "ambulatory patient medical record" is an all encompassing term. In fact, there is more than one type of ambulatory patient medical record. For simplicity, further reference to ambulatory patient medical records will be defined as follows:

(a) Outpatient Treatment Record (OTR) is that record maintained for dependents of active duty military personnel, retired military personnel, and dependents of retired or deceased military personnel.

(b) Health Record (HREC) is that record maintained for active duty military personnel.

3.1.1.2 The principal effort of this study addresses the control, disposition, and maintenance of the OTR in the hospital clinic setting, rather than the HREC which is generally maintained in the troop clinic.

3.1.2 Site Selection.

For the pilot study, the two Army medical treatment facilities selected were experiencing difficulties within their ambulatory patient medical records systems. A basic summary of each site selected is as follows:

(a) Brooke Army Medical Center (BAMC), Fort Sam Houston, Texas, is a teaching hospital with an average monthly ambulatory patient care work-load of approximately 55,000 visits.

(b) Ireland Army Hospital (IAH), Fort Knox, Kentucky, is a non-teaching hospital which has an average monthly ambulatory patient work-load of approximately 51,000 visits.

3.2 Procedures.

Procedure for the conduct of this study consisted of several steps (phases) which are listed as follows:

(a) Step 1 - Planning phase which consisted of pilot study site selections.

(b) Step 2 - Systems analysis of test sites to identify specific problem areas in ambulatory patient medical records systems. Step 2 also included on-site visitations to establish OTR baseline data during the 2d Quarter, fiscal year (FY) 73. The following management indicators were utilized:

(1) The medical record availability rate.

(2) The age of signed-out medical records, or the number of days the medical record had been signed-out of the records room.

(3) The natural medical record return rate. The term "natural" refers to a medical record which was returned to the medical records room without follow-up action having been taken to locate the record.

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(4) The retrieval success of records out over three days.

(5) The accountability of diagnostic results in medical records (i.e., tests ordered versus results filed).

(6) The age of diagnostic reports arriving at the medical records room.

(7) Unidentifiable diagnostic test reports accumulated over a 90 day period.

(8) Daily filing backlog of test results.

(c) Step 3 - Notification was made to test sites concerning baseline data findings. (See Appendix A.) Included in the letters of notification were a series of recommendations for implementation of the improvement actions which had been approved by the OTSG Multi-Directorate Health Care Advisory Board. The suggested improvement actions were as follows:

(1) Transfer control of the OTR and HREC from the Patient Administration Division to the Department of Clinics.

(2) Increase the number and grade of medical records personnel.

(3) Establish a universal medical records system supervisor.

(4) Establish a medical records suspense and locator clerk.

(5) Establish a universal medical records system messenger.

(6) Institute inservice training of medical records personnel.

(7) Improve the record charge-out and follow-up system.

(8) Provide embossed patient cards for all patients.

(9) Identify patient, originator, and custodian on the diagnostic report.

(10) Distribute the three-part laboratory form with one copy being sent to the originator (requestor), one copy placed in the laboratory file, and one copy forwarded to the records room to be retained in the medical record.

(11) Provide a thorough periodic medical audit system of ambulatory patient medical records.

(12) Improve the work environment.

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(13) Use management indicators as measurements of progress.

(d) Step 4 - Consisted of telephonic coordination and periodic on-site visitations to monitor possible changes in baseline data and to assist in implementation of recommended improvement actions. Also included as a part of Step 4 was the initiation of periodic written guidance concerning the implementation of improvement actions.

(e) Step 5 - Changes in the ambulatory patient medical records systems at test sites were analyzed and documented.

The steps (phases) indicated were intended to be introduced in a prescribed format of implementing an individual improvement action, to be followed by utilizing measures of effectiveness to determine the impact of that particular action on the ambulatory patient medical records system. Ideally, an improvement action would be implemented and the effectiveness of that action measured over a period of time of one or two months. However, due to a variety of uncontrolled variables such as unanticipated key personnel and policy changes (which will be discussed in subsequent portions of this report), the pilot study plan experienced several changes. Thus, it is improbable that this study could be precisely replicated.

4. FINDINGS.

The findings of this study are reflected in the degree of implementation of each of the 13 recommended improvement actions by each pilot study test site medical treatment facility. These findings are as follows:

4.1 Transfer of Control of the Ambulatory Patient Medical Records System.

The transfer of control of the ambulatory patient medical records system from the Patient Administration Division (PAD) to the Department of Clinics was completely implemented by both BAMC and IAH. (Note: On 20 May 1976, Health Services Command Regulation 10-1 reverted control of the ambulatory patient medical records to PAD.)

4.2 Increase the Number and Grade of Medical Records Personnel.

This improvement action was partially implemented by each of the pilot study test site medical treatment facilities. At both BAMC and IAH, the number of OTR section personnel was increased, but the grade of medical records personnel was not. Increase in numbers of medical records personnel at each medical treatment facility was as follows:

(a) BAMC - In 1972 (baseline year) there were 18 medical records personnel. By 1975 there were 22 medical records personnel.

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(b) IAH – In 1972 (baseline year) there were 10 medical records personnel, and this number had been increased to 15 by 1975.

Specific computations of baseline data used to establish increases in the number of medical records personnel at the pilot study test sites is contained in Appendix A to this report. A narrative description, derived from this study, for establishing staff requirements in ambulatory patient medical records areas is provided in APC (Ambulatory Patient Care) Model #5,[6] published July 1974 by the US Army Health Services Command (HSC).

4.3 Establish a Universal Medical Records System Supervisor.

Action to establish a universal medical records system supervisor, whose duty would be to oversee and utilize the management indicators to measure the effectiveness of the ambulatory patient medical records system, was not implemented at either of the pilot study test sites. Non-implementation of this recommended improvement action at each test site is explained as follows:

(a) BAMC – In a letter from the US Army Health Services Command (HSC) to BAMC, dated 23 August 1974, it was directed that this improvement action be implemented no later than 31 December 1974. A subsequent reply from BAMC to HSC, dated 4 October 1974, indicated that implementation of this action was not within the funding or man-years limitation authorized BAMC.

(b) IAH – The Ambulatory Patient Medical Records System Pilot Project Quarterly Report (4th Qtr, FY 75), dated 29 September 1975, indicates a similar reason for noncompliance with the implementation of this particular improvement action. In effect, due to imposed ceiling restraints and budget limitations, IAH indicated that action to establish a universal medical records system supervisor was not possible at that time.

Documentation referred to support pilot study test site actions (or lack thereof) indicated in subparagraphs 4.3(a) and (b) is attached in Appendix B to this report.

4.4 Establish a Medical Records Suspense and Locator Clerk.

BAMC established a medical records suspense and locator clerk in April of 1975, but discontinued the position several months later because of personnel shortages. IAH appointed a suspense and locator clerk in the fall of 1973, but the individual retired on a medical disability in September 1974. Due to civilian personnel delays in hiring after a disability retirement, as well as personnel shortages, the space was not filled until April 1975.

These individuals were used to locate and retrieve medical records shown as overdue by the results of the color-coded charge-out system outlined in paragraph 4.7 below.

4.5 Establish a Universal Medical Records System Messenger.

Both BAMC and IAH implemented the improvement action to establish a universal medical records system messenger. The function of this messenger was to routinely deliver and procure OTRs from different areas of the hospital. In addition, the messenger hand carried completed laboratory reports and other completed diagnostic test results to the medical records room in order that they could be filed in the OTR. Lastly, the universal medical records system messenger was of assistance to the records suspense and locator clerk by expediting the return of overdue records.

4.6 Institute Inservice Training of Medical Records Personnel.

An inservice training program of OTR section personnel was partially implemented at BAMC and fully implemented at IAH. A model for the establishment of an outpatient medical records section employee orientation and training program is contained in HSC APC Model #4[7], dated July 1974.

4.7 Improve the Record Charge-Out and Follow-Up System.

Each of the pilot study test sites completely implemented this recommended improvement action in the OTR sections, but implementation was slightly different at the two hospitals and these differences were:

(a) BAMC - Four different color charge-out folders were utilized, with a fifth color folder used for overdue records. The BAMC color coded system was designed to work in the following manner: one, charge-out slips for all medical records issued on a given day were placed in a red folder; two, charge-out slips for medical records issued the next day were placed in white charge-out folders; three, the third day the color blue was used; and four, the next sequential day the color green was used. At the end of the fourth consecutive day of the system, all charge-out slips that remained in red charge-out folders were placed in a yellow (or overdue) record folder, and the system began anew.

(b) IAH - A color coded system of three different colors was utilized, with a fourth color used for overdue records. The IAH system was designed to use the color orange on Mondays and Thursdays, yellow on Tuesdays and Fridays, and green on Wednesdays, Saturdays, and Sundays. A black folder was utilized for overdue records, as depicted in the following example. A charge-out slip on a record issued on Mondays was placed in an orange charge-out folder. If this medical record was not

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returned by Wednesday evening, the charge-out slip was transferred to a black (or overdue) folder, since orange folders were scheduled to be used again on Thursdays.

The intent of the color coded systems described above was the same. That is, on a daily basis the overdue folders were checked and any charge-out slips were duly noted. Follow-up to ascertain the location of medical records corresponding to overdue charge-out slips was then initiated.

At IAH a fifth color, white, was used as a charge-out folder for physicians or authorized staff members who wished to keep a record out longer than the maximum three-day period. This white charge-out folder was also used for patients hospitalized at other treatment facilities or whose records were otherwise authorized to be out of the files an extended period of time.

4.8 <u>Provide Embossed Patient Cards for All Patients</u>.

Both BAMC and IAH provided embossed patient identification cards to OTR patients.

4.9 <u>Identify the Patient, Originator, and Custodian of Diagnostic Reports</u>.

This recommended improvement action was implemented at both pilot study test sites. Basically the accomplishment of this improvement action operated as follows:

(a) The embossed patient card (referred to above in subparagraph 4.8) identified both the patient and the custodian of the OTR.

(b) The imprinting machine which utilized the embossed patient card identified the clinic or service requesting the diagnostic report.

4.10 <u>Revise the Distribution of the Three-Part Laboratory Form</u>.

The three-part laboratory form was designed with the intent that one part be filed by the laboratory, one part be returned to the originator (requestor), and one part be sent to the medical records room to be retained in the OMR. Both BAMC and IAH have implemented this recommended improvement action.

4.11 <u>Provide a Thorough, Periodic Medical Audit System of Ambulatory Patient Medical Records</u>.

Both BAMC and IAH used the internal mechanism via medical record

committees throughout the entire study to audit ambulatory patient medical records. However the number of records reviewed averaged only 20 to 30 per month. No measurements were taken to determine the effectiveness of the audits.

4.12 Improve the Work Environment.

As of 31 December 1975 there had been considerable environmental improvements of the OTR rooms at each pilot study test site. During the study period each medical treatment facility records room was airconditioned, and had adequate, overhead, indirect flourescent lighting installed in sound proof ceilings. Each medical records room was repainted, and fabric covered castered chairs, plus new desks and work tables, were provided. Open shelf filing was used at both hospitals. The width between the aisles in which to work the records was approximately 66 inches at IAH and 39 inches at BAMC.

4.13 Use Management Indicators as Measurements of Effectiveness.

A series of management indicators, consisting of the baseline data listed previously in paragraph 3.2(b) of this report, was intended to be used by the pilot study test site facilities themselves to measure the progress (or effectiveness) of recommended improvement actions. Neither BAMC nor IAH implemented this final improvement action, since it was planned that the universal medical records system supervisor would be the monitor of the progress (or effectiveness) of recommended improvement actions and, as stated in paragraph 4.3 (and supported by Appendix B), neither BAMC nor IAH ever established the position of universal medical records system supervisor.

Although the management indicators were not utilized by the pilot study hospitals themselves, they were utilized as measures of effectiveness by the project officer during periodic on-site visits. As such, the management indicators proved to be of considerable value in measuring the status of, and evidencing changes in, the ambulatory patient medical records systems at both test facilities.

A summary of the findings is depicted graphically in Figure 1 and reflects the following findings for each of the pilot study test sites:

(a) BAMC.

(1) Completely implemented 7 of 13 recommended improvement actions.

(2) Fully implemented, but discontinued one improvement action (i.e., the establishment of a medical record suspense and locator clerk).

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OUTPATIENT MEDICAL RECORDS SYSTEMS

GRAPHIC REPRESENTATION OF IMPROVEMENT ACTION IMPLEMENTATION

IMPROVEMENT ACTIONS	BROOKE ARMY MED CNTR CALENDAR YEARS			IRELAND ARMY HOSPITAL CALENDAR YEARS		
	73	74	75	73	74	75
1. Trf of Control of Med Rec Sys						
2. Inc number and Grade of Rec Pers						
3. Estb a Universal Med Rec Sys Supv						
4. Estb Med Rec Suspense/Locator Clk						
5. Estb a Universal Med Rec Messenger						
6. Institute Inservice Tng of Rec Pers						
7. Improve Rec Chg-Out and Follow-Up						
8. Prov Pnt Cards for All Patients						
9. Ident Pnt, Originator and Custodian on Diagnostic Report						
10. Rev the Distr of the 3 Part Lab Form						
11. Estb a Rec Audit Sys						
12. Improve Work Environment						
13. Use Mgt Indicators to Meas Imprv						

LEGEND: ☐ = No Implementation ▨ = Partial Implementation ■ = Complete Implementation

FIGURE 1

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(3) Partially implemented three improvement actions by: increasing the number, but not the grade, of medical record personnel; by providing on-the-job training, but not formal inservice training of medical records personnel; and, by not auditing a sufficient number of medical records from which to measure results for the study.

(4) Did not implement two improvement actions: one, the establishment of a universal medical records system supervisor; and two, use management indicators as measures of progress (effectiveness) of the ambulatory patient medical records system.

(b) IAH.

(1) Completely implemented 9 of 13 recommended improvement actions.

(2) Partially implemented two improvement actions by: increasing the number, but not the grade, of medical record personnel; and by not auditing a sufficient number of medical records from which to measure results for the study.

(3) Did not implement two improvement actions, which consisted of establishing a universal medical records system supervisor and using management indicators to measure the progress (effectiveness) of the ambulatory patient medical records system.

5. DISCUSSION.

5.1 General.

As noted in paragraph 3.2 (Procedures), of this report, a variety of uncontrolled variables materially affected the conduct of this study. For example, there were unanticipated changes in personnel and policies at both pilot study test sites which merit discussion.

5.1.1 Personnel Changes.

When key personnel, or other significant personnel, are changed, the continuity of the conduct of a study is interrupted, since a newly arrived individual cannot be expected to be as thoroughly familiar with a study as was his/her predecessor. Personnel changes during the conduct of this particular study occurred as follows:

(a) BAMC personnel changes:

(1) Key personnel: 3 Commanders
                     2 Acting (Interim) Commanders
                     3 Chiefs, Department of Clinics
                     3 Chiefs, Administrative Support Branch

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(2) Other significant personnel: 4 NCOICs (Non-commissioned Officer in Charge) of OTRs.

(b) IAH personnel changes:

    (1) Key personnel: 2 Commanders
                                  3 Chiefs, Department of Clinics
                                  3 Chiefs, Administrative Support Branch

(2) Other significant personnel: 2 Medical Records Locator Clerks.

(c) Health Care Studies Division (HCSD): 2 different Project Officers.

5.1.2 Policy Changes.

Unanticipated policy changes occurred as follows:

(a) FY 74: Man-year restrictions.

(b) FY 75: Man-year restrictions.
                   Funding constraints.
                   Moratorium on TDY travel.

5.2 Specific.

Unanticipated personnel and policy changes, and the fact that the pilot study test sites were unable to implement two of the improvement actions (reference, FINDINGS, paragraphs 4.3 and 4.13) adversely influenced the measurements of effectiveness of the ambulatory patient medical records system. As previously noted, the intent of the study was to implement an individual improvement action and to measure the effectiveness of that action over a one or two month period. Since this procedure was not followed, actual measurements of the effectiveness of improvement actions was limited to annual assessment by the HCSD project officer. Therefore, of the thirteen total scheduled improvement actions only five were measured which permitted factually supported conclusions, five were observed and formed the basis for conclusions based on opinion, and three improvement actions received no assessment. The following discussion is separated into these three categories.

5.2.1 Discussion of Improvement Actions Supported by Factual Findings.

5.2.1.1 Measurement of the Record Charge-Out and Follow-Up System.

Although the implementation of a record charge-out and follow-up

system was indicated as a single improvement action, the successful measurement of the system was actually predicated on two factors. The first factor was to identify the medical records which had been charged-out, to include identification of those records that were overdue for return. The identification of charged-out records was accomplished at both pilot study test sites through the use of color coded charge-out folders. The measurement of the effectiveness of color coded folder identification will be discussed later within this numbered paragraph.

The second factor, or follow-up for return of overdue records, was directly dependent on the effectiveness of the medical records suspense and locator clerks. Since the establishment of a medical records suspense and locator clerk was a separate improvement action, the measurement of the effectiveness of this individual on the overall record charge-out and follow-up system will be discussed in paragraph 5.2.1.2.

The effectiveness of the color coded record charge-out system as outlined in paragraph 4.7 and Appendix C was evidenced by the ease with which medical records personnel could identify charged-out records and could account for the number of overdue records in the files. The type and colors of the charge-out folders used were prominent, and the system facilitated monitoring by supervisory and management personnel. Table 1 depicts the identification of overdue records as found by the project officer during on-site visits to the study hospitals.

TABLE 1

IDENTIFICATION OF OVERDUE MEDICAL RECORDS CHARGE-OUT FOLDERS
(Four days at BAMC - Three days at IAH)

Brooke Army Medical Center (BAMC)	SEP 72	JUN 73	MAR 74*	JUN 75
Total charge-out folders in files	5,000	3,802	-	2,415
Overdue (Yellow) folders	3,350	2,661	-	1,442
Percent of charge-outs overdue	67%	70%	-	60%

*No data gathered as follow-up not implemented

Ireland Army Hospital (IAH)	OCT 72+	JUN 73	MAR 74	JUN 75
Total charge-out folders in files	-	865	730	964
Overdue (Black) folders	-	415	110	422
Percent of charge-outs overdue	-	48%	15%	44%

+No data gathered as overdue color system not initiated

SOURCE: Data collected by project officer

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5.2.1.2 Measurement of the Effectiveness of the Medical Records Suspense and Locator Clerks.

BAMC had a suspense and locator clerk for only approximately four months beginning in April 1975. His effectiveness is shown on Table 2 by the reduction of overdue records from 71 percent in 1973 to 60 percent in June 1975.

IAH appointed a record suspense and locator clerk in the fall of 1973 who worked until September 1974. The results of her efforts are shown on Table 2 by the reduction of records charged-out more than two days from 52 percent in 1973 to 22 percent in 1974. This position was then vacant from September 1974 until April 1975 when another individual was hired. She did not have sufficient time to learn the job and accomplish a reduction of overdue records before the project officer made his last data collection in June 1975. This seven-month vacancy, along with a general personnel shortage, accounts for the increase on Table 2 of overdue records to 59 percent in 1975.

TABLE 2

AGE OF SIGNED-OUT MEDICAL RECORDS

The following age groupings were computed from the dates on the medical record charge-out folders. Weekends and holidays were not counted.

Brooke Army Medical Center (BAMC)	SEP 72 (N=414)	JUN 73 (N=1,117)	MAR 74*	JUN 75 (N=332)
Same day & 1 day old	17%	26%	-	35%
2 days old	6%	3%	-	5%
3-5 days old	11% ⎫	3% ⎫	-	7% ⎫
6-10 days old	17% ⎬ 77%	6% ⎬ 71%	-	4% ⎬ 60%
11 plus days old	49% ⎭	62% ⎭	-	49% ⎭

*No data gathered as no improvements implemented

Ireland Army Hospital (IAH)	OCT 72 (N=1,517)	JUN 73 (N=865)	MAR 74 (N=390)	JUN 75 (N=176)
Same day & 1 day old	43%	40%	72%	36%
2 days old	3%	8%	6%	5%
3-5 days old	11% ⎫	4% ⎫	9% ⎫	14% ⎫
6-10 days old	6% ⎬ 54%	11% ⎬ 52%	6% ⎬ 22%	3% ⎬ 59%
11 plus days old	37% ⎭	37% ⎭	7% ⎭	42% ⎭

SOURCE: Data collected by project officer.

5.2.1.3 Provide Embossed Patient Cards for All Patients.

This improvement action provided a method of identifying the patient, originator, custodian, and date on diagnostic reports. The discussion is included in paragraph 5.2.1.4 below.

5.2.1.4 Measurement of Identification of Patient, Originator, and Custodian of Diagnostic Reports (Provide Embossed Patient Cards for All Patients).

The measurement of the effectiveness of implementing an action to identify the patient, originator, and custodian of diagnostic reports is predicated on the number of unidentifiable diagnostic reports accumulated over a given period.

Identification of the patient and the custodian of the OTR is accomplished through the use of embossed patient cards, samples of which are shown in Figure 2.

MEDICAL SERVICE
OUTPATIENT CARD

20   12345 67 89
                    02 MH MRR
DOAKS, JOSEPH E
NOV 1930 M   RET USA
MSG
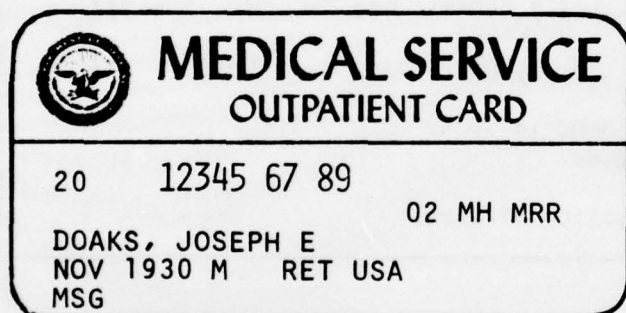
Sample--Sponsor's Card
(Retired MSG)

MEDICAL SERVICE
OUTPATIENT CARD

30   56789 12 34
                    02 MH MRR
DOE, JANE B
NOV 1937 F   AD USA
SFC JOE B
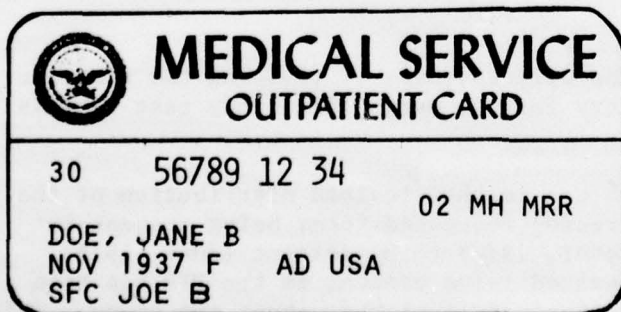
Sample--Dependent Wife's Card
(Active Duty SFC)

FIGURE 2.   SAMPLES OF EMBOSSED PATIENT CARDS

The identification of the clinic or activity which originates the diagnostic request is achieved by the insertion of a strip bearing the clinic or activity name in the imprinting machine. A picture of one type of embossing machine on which the cards are made, and the imprinting machine in which the cards are used, is shown in Figure 3.

Table 3 reflects the number of unidentifiable diagnostic reports accumulated over a 90 day period at the pilot study tests during baseline months of data collection (October, 1972) and during subsequent visits by the project officer.

TABLE 3

UNIDENTIFIABLE DIAGNOSTIC REPORTS ACCUMULATED OVER A NINETY DAY PERIOD

	OCT 72	JUN 73	MAR 74*	JUN 75
Brooke Army Medical Center (BAMC)	5,000**	920	–	756
Ireland Army Hospital (IAH)	2,000**	303	345	75

* Data was not gathered at BAMC in 1974.
** Baseline data approximations.

SOURCE: Data collected by project officer.

5.2.1.5 Measurement of Revision of Distribution of the Three-Part Laboratory Form.

The measurement of the effectiveness of revising the distribution of the three-part laboratory form at each pilot study test site is shown in Table 4.

Interpretation of Table 4 is that revised distribution of the three-part laboratory form increased requested forms being present in BAMC OTRs from 52 percent (October, 1972) to 81 percent (June, 1975). At IAH, the percentages of requested forms present in the OTR has been maintained at a greater than 90 percent level throughout the study. This same distribution of the three-part radiographic report (SF 519A) should also increase the percentage of those forms that get filed in the OTRs.

PATIENT CARD EMBOSSER AND IMPRINTER - ELLIOTT BRAND

FIGURE 3

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TABLE 4

ACCOUNTABILITY OF LABORATORY RESULTS IN MEDICAL RECORDS

Brooke Army Medical Center (BAMC)

	OCT 72	JUN 73	MAR 74*	JUN 75
Number of records reviewed	100	31		122
Analyses requested therein	46	87		377
Requested forms present	52%	62%	-	81%
Results documented only	26%	0%	-	0%
Results missing entirely	22%	38%	-	19%
	100%	100%		100%

* No data gathered as no improvements implemented.

Ireland Army Hospital (IAH)

	OCT 72	JUN 73	MAR 74	JUN 75
Number of records reviewed	100	100	61	95
Analyses requested therein	58	149	84	642
Requested forms present	95%	93%	99%	96%
Results documented only	0%	1%	0%	2%
Results missing entirely	5%	6%	1%	2%
	100%	100%	100%	100%

SOURCE: Data collected by project officer with assistance of hospital medical records librarians.

5.2.2 Discussion of Improvement Actions Supported by Observations and Opinions.

5.2.2.1 Increase the Number and Grade of Medical Records Personnel.

The baseline data findings, outlined in Appendix A, include a process for computing staffing requirements for a medical records area. The time and motion method of computing requirements was used by both project officers. It was found to be useful in determining personnel requirements and work distribution at each study site. This baseline procedure was refined somewhat and published in the US Army Health Services Command Ambulatory Patient Care Model #5[6] in 1974.

An increase in numbers, but not grades, of personnel was

accomplished at both hospitals. The increase at BAMC was not sufficient to satisfy the staffing requirements of the study. Additionally, there was an average annual personnel turnover rate of 83 percent at BAMC and 28 percent at IAH. No meaningful objective measurement of this improvement action was possible.

5.2.2.2 Establish a Universal Medical Records System Messenger.

The messengers were qualified and experienced medical records clerks with an appreciation for the control of medical records and diagnostic reports. The use of the messengers contributed to keeping the handling of medical records and diagnostic papers under the control of the medical records system supervision.

Measurement of this improvement was not possible for two reasons. First, the system was already in effect to some extent at both hospitals at the beginning of the study. Second, improvements to the system which consisted of expanding the service and signing accountability for medical records occurred late in the study at BAMC and was a divided responsibility when initiated at IAH.

5.2.2.3 Institute Inservice Training of Medical Records Personnel.

The specifics of this improvement were that the study hospitals each develop a training program to include an initial orientation, training, and periodic refresher training, as well as sessions of participative management between the supervisor and the employees.

Although this improvement was only partially initiated at BAMC and too late to make an objective assessment at IAH, some positive observations were made. The supervisor at IAH stated there was a noticeable increase in job interest, morale, and efficiency. The supervisor at BAMC also noted an increase in job interest, principally due to participative management.

5.2.2.4 Improve the Work Environment.

The improvements to the work environment listed in paragraph 4.12 under "Findings", which were implemented at both hospitals, greatly enhanced the appearance and utility of the medical records rooms. Observations by the supervisors suggested that increased morale, job satisfaction, and efficiency were evident as a result of the environmental improvements.

One important environmental factor was found to be the width of the aisles. For example, as a plus, at IAH the width of the aisles between open shelves of OTRs was approximately 66 inches. As such, several medical records personnel could be withdrawing or filing OTRs and

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filing diagnostic reports on opposite sides of the same aisle, and still leave room for the transit of other workers through the aisle. In contrast, as a minus, at BAMC the aisle width was only 39 inches, which meant a person working the files in a given spot had to move to the side each time another worker passed. There was also no room for back-to-back filing in the same aisle.

5.2.2.5 Use the Management Indicators as Measurements of Progress.

While the management indicators, as a tool of management, were never adopted by the study hospitals, they were used successfully by the project officers on several occasions. The improvement actions that are supported by factual findings (paragraph 5.2.1) are a result of such use. As such they could be used successfully by the hospitals to determine the periodic status of their medical records systems. There was also an expressed interest by the management, supervisors, and some of the employees as to the results of the data gathering efforts by the project officer.

5.2.3 Discussion on Improvement Actions for Which No Assessments Could be Made.

5.2.3.1 The transfer of control of the ambulatory patient medical records systems from the Patient Administration Divisions to the Department of Clinics was implemented as the result of an Office of the Surgeon General directive in August of 1972, or before the study began. As a result no baseline data could be gathered nor could observations be made concerning this action.

5.2.3.2 The establishment of a universal medical records system supervisory position was precluded by Army-wide man-year limitations and hiring suspensions. Therefore, no evaluation of this position was possible.

5.2.3.3 The medical records audit committees at both hospitals audited an average of 20 to 30 outpatient medical records monthly. However since neither project officer was a physician, no attempt was made to evaluate the effectiveness of the medical audits.

6. CONCLUSIONS.

6.1 Conclusions Based on Factual Findings.

(a) The utilization of the color coded charge-out folders results in overdue medical records being readily identifiable (paragraphs 4.7 and 5.2.1.1).

(b) The medical records suspense and locator clerks contribute

significantly to the reduction in the number of overdue records charged-out of the files (paragraphs 4.4 and 5.2.1.2).

(c) The use of the embossed patient identification card system by the hospital clinics produces a decrease in the number of unidentifiable diagnostic reports (paragraphs 4.8 and 4.9, and paragraphs 5.2.1.3 and 5.2.1.4).

(d) Sending one copy of the three-part laboratory report form directly to the medical records room contributes to a higher ratio of reports filed compared to the number of reports requested (paragraphs 4.10 and 5.2.1.5).

6.2 Conclusions Based upon Observations and Opinions.

(a) The workload computations and staffing guides such as outlined in Appendix A and APC Model #5[6] are considered to be useful and informative in analyzing the tasks in the medical records rooms and, by use of a time and motion study, can indicate the personnel required (paragraphs 4.2 and 5.2.2.1).

(b) The utilization of a universal medical records system messenger appears to decrease the time the medical records are out of the files. He assists in retrieval of overdue records and assures more prompt delivery of diagnostic reports to the medical records room. It is important that control of this messenger be maintained under the supervision of the medical records system (paragraphs 4.5 and 5.2.2.2).

(c) Inservice training of medical records personnel (outlined in APC Model #4[7]) was observed by the supervisors to result in an increase in job satisfaction, morale, and efficiency (paragraphs 4.6 and 5.2.2.3).

(d) Improvements to the work area such as adequate lighting, painting, sound proof ceilings, as well as new and sufficient furniture, also were observed to result in increased job satisfaction, morale, and efficiency. Adequate aisle space for transit and for working back-to-back between the open shelf files is an important factor, particularly when there is the necessity for personnel to be stationed in a fixed spot to do file work in the medical records (paragraphs 4.12 and 5.2.2.4).

(e) The management indicators listed in paragraph 3.2(b) of this report are considered useful tools for management to measure the status of the medical records system (paragraphs 4.13 and 5.2.2.6).

(f) Due to the non-physician status of the project officers, no conclusion was made of the effectiveness of the medical audit committee (paragraphs 4.11 and 5.2.3.3).

7.   RECOMMENDATIONS.

(a)   That all Army medical treatment facilities be required to establish a system to readily identify the age of signed-out medical records such as the color coded charge-out folder system used in this study.   (Reference Appendix C.)

(b)   That all Army medical treatment facilities be advised to give strong consideration to use the medical records suspense and locator clerk system. If a medical records suspense and locator clerk is not an authorized position at any given Army medical treatment facility, then the function should be assigned as a primary duty of one or more existing OTR clerks.

(c)   That all Army medical treatment facilities be required to utilize the embossed card to identify the patient and the custodian of the records, and the imprinting machine to identify the clinic/service requesting a diagnostic test, to facilitate distribution of completed reports.

(d)   That each Army medical treatment facility be required to review its distribution procedure of the three-part laboratory form to insure that one copy is sent to the originator (requestor), one copy is placed in the laboratory file, and one copy is forwarded to the records room to be retained in the medical record. It is also recommended that this same distribution be utilized for the three-part radiographic report (SF 519A).

(e)   That all Army medical treatment facilities consider:

(1)   An evaluation of the number of personnel required to support the ambulatory patient medical records system as prescribed by APC Model #5[6].

(2)   Establishing a universal medical records system messenger to expedite the return of overdue medical records, and completed diagnostic reports, to the medical records room.

(3)   Providing an inservice training program for medical records personnel as outlined in APC Model #4[7].

(4)   Environmental improvements which provide sufficient aisle space to provide effectiveness, while at the same time improve the working environment and enhance the appearance of the medical records room.

(5)   Utilizing the management indicators to measure effectiveness by monitoring the status of, or changes in, the ambulatory patient medical records system.

8. REFERENCES.

1. "Medical Records Services," <u>Accreditation Manual for Hospitals</u>.
    Chicago: Joint Commission on Accreditation of Hospitals, 1975.

2. "Systems Analysis Study Towards a 'New Generation' of Military
    Hospitals." Pittsburgh: The Westinghouse Electric Corporation
    Health Systems Department, 1970. Vol. 3, pg 97.

3. "General Functional System Requirement: Patient Care System
    (PACAS)." Fort Belvoir, VA, 1972. Pg 4.2.1.

4. McIntyre, J.E., "Management Survey: Department of Hospital Clinics/
    Professional Ancillary Services." Fort Hood, TX, 1972, Pg 7.

5. "Analysis of CONUS Outpatient Care System (COCAS)." Department of
    the Army: Office of the Comptroller of the Army, 1972.

6. APC Model #5, "Outpatient Medical Records Improvement Actions."
    US Army Health Services Command, HSC-OP-PR, July, 1974.

7. APC Model #4, "Outpatient Medical Records Section Employee
    Orientation and Training Model." US Army Health Services Command,
    HSC-OP-PR, July, 1974.

APPENDIX A

NOTIFICATION TO PILOT STUDY
TEST SITES OF
BASELINE DATA FINDINGS

DEPARTMENT OF THE ARMY
U. S. ARMY MEDICAL FIELD SERVICE SCHOOL
BROOKE ARMY MEDICAL CENTER
FORT SAM HOUSTON, TEXAS   78234

MEDEW-ZHC   11 December 1972

SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
         System Pilot Project (Brooke General Hospital)

TO: Commander
            Brooke General Hospital
            Fort Sam Houston, Texas 78234

1. General.

The purpose of this report is to provide your facility certain basic
data concerning the current operations of the Outpatient Medical Record
Section to be used in developing measures of effectiveness for local
management and to suggest the initiation of certain innovations which
are designed to improve both customer and staff service (Step #3 of the
Pilot Project). The data provided is the product of staffing, super-
vision, operating space, and equipment currently available. The major
object of this study is to develop standards for staffing, space, equip-
ment and management techniques which will in your environment produce
an accurate, current medical record at the time the patient presents him-
self for care.

2. Current Conditions.

Only summary elements are provided in this report to capsulize the
major areas of the operation. Some organizational objectives should
be set or changed based upon these elements and operational changes
made where deemed appropriate. Additional details and the total affect
of this information on your system may be discussed with the project
officer.

    a. Over 400 "charged-out" records were surveyed with the following
age results (time since charged-out):

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          1 day old   - 17%   6-10 days old   - 17%
          2 days old   - 6%   11 or more days old - 49%
          3-5 days old - 11%   Oldest record   - 12 months

     NOTE: There were approximately 5000 records charged-out.

     b. The age of diagnostic records, lab slips, consultations, etc.,
received during a one day period indicates the following:

          1 day old   - 29%   6-10 days old   - 16%
          2 days old   - 7%   11 or more days old - 16%
          3-5 days old - 32%   Oldest record   - 11 months

     NOTE: This information is based on the date completed by the
lab, etc., until received by the record room.

     c. The age of unfiled diagnostic records (total of 282):

          No date   - 4%   6-10 days old   - 14%
          1 day old   - 3%   11 or more days old - 62%
          2 days old   - 3%   Oldest record   - 11 months
          3-5 days old - 14%

     NOTE: Two-hundred eighty two documents is about 3.7 hours of work
and is not really considered a back log. The age, however, is skewed to-
ward an older aged record which would tend to indicate an unacceptable
delay in the delivery of diagnostic records to the record room. There were
also about 5,000 unidentifiable (Patient Identification) unfiled medical
documents on hand. No current action was being taken to identify by
doctor, clinic, or patient because of a personnel shortage. (These records
were not considered in the age study.)

     d. Thirty-eight percent[*] of all phone calls to the hospital laboratory
were for lab test results. Thirty-six percent of this group were requests
for test results completed three or more days previous (or 14 of every 100
calls). * The Comptroller of the Army study showed 40% (released in June
1972).

     e. A quantitative, diagnostic record, review of 100 randomly
selected outpatient records revealed the following:

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Type Request	(Sample Percent)	Diagnostic Documents Not Filed	If not filed Results also Not Documented	TOTAL
Lab Work	39%	54%	20%*	74%
X-Ray	11%	46%	15%	61%
Consultations	50%	34%	0%	15%
	100%	34%	9%	43%

        (1) This review considered only the last 5 visits of each
patient.

        (2) Twenty-seven percent of the records had illegible documents
(total page) appearing with the top 3 documents of the record.

    f. Fifty "charge-out" cards were pulled and the staff and super-
visor attempted to locate and return them to the record room. Only
5, or 10%, could be found.

        (1) It took 4.2 minutes to search for each record.

        (2) Ninty-four percent of the records had been "charged-out"
over 11 days.

        (3) The only selection criteria was that each record selected
must have been out at least 3 days.

    g. A controlled study using 15% of the records file area (terminal
digit numbers 15-31) was conducted to determine the normal record return
rate for _one_ days "charged-out" records.

        19% were returned the first day
        52% were returned the second day
        25% were returned within a 3-5 day period
         4% were returned within a 6-10 day period

        NOTE: This return rate was not considered normal by the staff and

_____

* As Compared to the Comptroller of the Army (COA) Study of 25%.

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can be substantiated by the fact that of 50 records used in f. above, 94%
of them were older than 11 days and of the 414 records used in a. above,
49% were 11 days or older. However, using this study 29% exceed the
standards set by your facility (returned within two days).

     h. A record return rate (within 24 hours) of 25 walk-in patients
revealed the following:

          72% were returned within 24 hours
          16% were sought and found (time/record 4.2 minutes)
          12% were considered lost

     i. The success rate for pulling records for appointments was 81%
(clinic range - 35% - 95%). There was an additional 9% "signed-out"
to the same or another clinic.

          (1) The 81% is up from the 73% shown in a 10 week study conducted
from January - March 1972.

          (2) See j(4) below.

     j. At the time of this study there were approximately 53,000 records
in the power shelves, 5,000 of which were signed out, 3,000 in boxes
ready to be moved to the records storage room, and 24,000 records in the
storage room.

          (1) Current filing shelf requirements to maintain 3 years of
records (REF. AR 340-18-9) is determined as 1,146.21 feet.

          (2) There are approximately 12 months of records in the main
record room.

          (3) There are 648 feet of power shelving in the medical room
leaving a need for 499 feet.

          (4) Because of a shortage of personnel, there is no attempt to
search outside the main room for medical records   (except for special
requests).

     k. The following information is provided to assist in establish-
ing data for staffing requirements (see also Incl 1, 2, and 3):

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        (1)   Reception desk processing time for walk-in patients: 3.6
min/patient.

            (a) An actual count indicates 130 emergency room (ER) patients
are processed during an average/duty day. (260/24 hr. period)

            (b) See (3) below for additional shift work load.

            (c) The survey day had 158 E.R. patients during normal duty
hours plus 102 information seeking patients. (This day followed a three
day weekend.)

        (2)   Record retrieval time for walk-in patients: 1 minute (in-
cluded in k(1) above).

        (3)   Reception desk time to provide assistance for information
seeking or appointment keeping patients: 2.15 minutes (40% of total
customers).

Percentage of workload distribution k(1) and (3)	Work Period	Number of Customers
85%	7-3	67
10%	3-11	8
5%	11-7	4

    (4)   Appointment Record pulling: 1.16 min/record

            (a) Does not include preliminary preparation of clinic
request document.

            (b) Time to prepare sheets for pulling of records: 2.15
min/sheet (average of 64 sheets/day/week day for 15 clinics).

            (c) Average number of appointment records requested: 511/week
day.

    (5)   Medical document sorting time: 0.14 min/document

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          (a)   Time included using a circular multi sorte table.

          (b)   A two week check showed an average of 1700 documents/week
day with a range of 800 - 3000/day.

     (6)   Filing medical documents (lab, x-ray slips, etc) 0.787 min/
document.

     (7)   Filing numerically sequenced charts: 0.916 min/chart.

          (a)   An average day (7 day week) 687 Records

                        (5 day week) 833 Records

          (b)   Record sequencing time: 0.10 min/record.

     (8)   Making a new chart: 1.13 min/chart.

          (a)   Requires pre sort time.

          (b)   Requires filing time.

          (c)   Average of 40 per day.

     (9)   Record search & retrieval time for signed out records: 4.2
min/record.

          (a)   It will take 346.43 hours to gather the currently "signed
out" records.

          (b)   The current success rate is 10% (A directive to return
all charged out records should be issued to eliminate-initial search and
retrieval of the 5,000 records currently out.)

          (c)   Requires pre sort time.

          (d)   Requires filing time.

          (e)   The current rate in 2 days is 71%.

          (f) Records not returned in two days = 242 records (29% of
833 records).

     (10) Non-Productive times, disruption, distraction, or idle
time factors were not considered in the productive work time measures
listed.

     1. A general observation of the medical records room would give one
the impression that a dedicated supervisor is making maximum use of the
caliber of employee available.

3. Recommendations.

     a. The following recommendations are proposed for implimentations
on or about 1 January 1973. The project officer has discussed these
matters with your staff and is available for consultation during the
preparation for and implimentation of the innovations.

          (1) Transfer the Medical Records Section from the Control of
the Registrar to the Chief, Department of Clinics (completed in
October 1972).

          (2) Establish adequate staffing for a 24 hr, 7 day a week
operation (see inclosures). Continue to provide 24 hour service.

          (3) Increase the medical record room staff by seven using a
minimum of GS-3 level personnel. A fund cite for paying wages of
this employee for a 3-6 month period will be forwarded under separate
cover.

          (4) Develop a specific in-service training program to cover
an initial orientation, training, and periodic refresher training.

          (5) Establish a record charge-out and follow-up system
designed to meet your objectives (i.e., records returned within 2
days).

          (6) Provide for a record transfer document to be used when the
medical record is moved from one clinic to another which should include
immediate notification of the Outpatient Record Section.

(7) Provide outpatient recording cards to all active duty,
retired, and dependents.
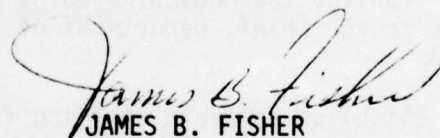
(8) Provide for proper identification on medical documents
for both patient, clinic, and doctor requistion test and record
custodian information.

(9) Establish use of the new three part lab slips, routing
one to the physician, one to the medical record section, and one for
file.

(10) Establish a staff messenger service to ensure among other
things a timely return of medical records from the clinics (reference
3a (5) above).

    b. Upon implimentation of the above recommendations operating data
will again be gathered and compared with the baseline date listed in
para 2 above to prove the value of the above recommendations and the
effectiveness of your operational changes.

3 Incl   JAMES B. FISHER
as   LTC, MSC
                                Project Officer
                                Health Care Research Division

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WORKLOAD COMPUTATIONS
(Minutes)

Primary Tasks	Week Day	Week End Day
1. Reception Desk Processing ER -260 X 3.6 min = 936 Min/hour 16 X 3.6 = 57.6 ⎤ During week Max/hour 40 X 3.6 = 144.0 ⎦ day 7-3 shift	936	936
2. Patient Assistance Processing Ave/day -173 X 2.15 min = 372 (only 10% of this workload on weekends)	372	38
3. Appointment Processing Ave # sheets -64 X 2.75 min = 176 Ave # appointments -511 X 1.16 min = 593	769	
4. Medical Document Sorting Ave daily -1700 X 0.14 min = 238 Week end ave - 100 X 0.14 = 14 Min week day - 800 X 0.14 = 112 Max week day - 3000 X 0.14 = 420	238	14
Medical Document Filing Ave daily - 1700 X 0.787 min= 1338 Min week day -800 X 0.787 = 630 Max week day - 3000 X 0.787 = 2361 Week end ave - 100 X 0.787	1338	79
5. Medical Record Sorting and Filing Ave # Med records -833 X 0.10 min(sorting) = 84 Ave # Med records -833 X 0.916 min(filing) = 763 Ave # Med records (week end) -275 X 0.10 = 28 Ave # Med records (week end) -275 X 0.916 = 252	847	280
6. Making New Records Ave/day -40 X 1.13 min = 46 Ave/day - 7 X 1.13 min = 8	46	8

7. Record Search and Retrieval
Ave # records- 242 X 4.2 min(search) = 1017
      - 242 X 0.10 min(sorting) = 25
      - 242 X 0.916 min(filing) = 222
	1264	

TOTAL	5810	1355

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Incl 1

WORKLOAD DISTRIBUTION[*]
(Percentage)

Primary Task	Week day Hours		
	7-3	3-11	11-7
1. Reception Desk Processing	50	40	10
2. Patient Assistance Processing	85	10	5
3. Appointment Processing	100		
4. Medical Document Sorting		25	75
Medical Document Filing			100
5. Medical Record Sorting & Filing	100		
6. Making New Records	30	5	65
7. Record Search and Retrieval	100		

[*] Medical record section supervisor's estimation.

Incl 2

STAFFING GUIDE
(Work Distribution in Minutes)

Primary Task	Week Day Shift			Week End Shift		
	7-3	3-11	11-7	7-3	3-11	11-7
1. Reception Desk Processing	468	375	94	468	375	94
2. Patient Assistance Processing	317	38	19	33	4	2
3. Appointment Processing	769					
4. Medical Document Sorting		60	179	4	11	
Medical Document Filing			1338			79
5. Medical Record Sorting & Filing	847			280		
6. Making New Charts	14	3	30	3	1	6
7. Record Search & Retrieval	1264					
8. Other Duties (15%)	549	72	238	118	58	29
Total Working Time	4226	548	1898	906	449	210
Computations						
Non-Productive Time (6%)	254	33	114	55	27	13
Time Involvement	4480	581	2012	961	476	223
Man Hours (+ 60)	74.66	9.68	33.53	16.01	7.93	3.71
Personnel (+ 8)	9.33	1.21	4.19	2.00	.99	.46
Leave Factor (.11%)	1.02	.13	.46	.22	.10	.05
Personnel Work Requirements	10.35	1.34	4.65	2.22	1.09	.51
Shift Leaders	1	1	1	1	1	1
Supervisors	1					
Total Personnel Requirements	12	2	5	3	2	2
SUB TOTAL		19			7	
GRAND TOTAL				22		

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Incl 3

DEPARTMENT OF THE ARMY
U. S. ARMY MEDICAL FIELD SERVICE SCHOOL
BROOKE ARMY MEDICAL CENTER
FORT SAM HOUSTON, TEXAS   78234

MEDEW-ZHC   7 December 1972

SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
           System Pilot Project (Ireland Army Hospital)

TO: Commander
           Ireland Army Hospital
           Fort Knox, KY 40121

1. General.

The purpose of this report is to provide your facility certain basic
data concerning the current operations of the Outpatient Medical Record
Section to be used in developing measures of effectiveness for local
management and to suggest the initiation of certain innovations which
are designed to improve both customer and staff service (Step #3 of the
Pilot Project). The data provided is the product of staffing, super-
vision, operating space, and equipment currently available. The major
object of this study is to develop standards for staffing, space, equip-
ment and management techniques which will in your environment produce
an accurate, current medical record at the time the patient presents him-
self for care.

2. Current Conditions.

Only summary elements are provided in this report to capsulize the
major areas of the operation. Some organizational objectives should
be set or changed based upon these elements and operational changes
made where deemed appropriate. Additional details and the total affect
of this information on your system may be discussed with the project
officer.

    a. Over 150 "charged-out" records were surveyed with the following
age results (time since charged out):

SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
           System Pilot Project (Ireland Army Hospital)

1 day old	- 43%	6-10 days old	- 6%
2 days old	- 3%	11 or more days old	- 37%
3-5 days old	- 11%	Oldest record	- 9 months

NOTE: There were approximately 900 records charged-out.

   b. The age of diagnostic records, lab slips, consultations, etc.,
received during a one day period indicates the following:

1 day old	- 23%	6-10 days old	- 14%
2 days old	- 24%	11 or more days old	- 22%
3-5 days old	- 17%	Oldest record	- 8 months

NOTE: This information is based on the date completed by the
lab, etc., until received by the record room.

   c. The age of some 2,000 unfiled unidentifiable diagnostic records
was not considered during the study as repeated efforts had been made
to identify them. About 1,000 of these documents are received each
month.

   d. Sixty three percent* of all phone calls made to the hospital
laboratory were requests for test results. Seventy six percent of
this group were requests for tests results completed three or more
days previous (or 48 of every 100 calls). *The COA Study showed only
40%.

   e. A quantitative, diagnostic record, review of 100 randomly
selected outpatient records revealed the following:

Type Request	(Sample Percent)	Diagnostic Documents Not Filed	If not filed Results also Not Documented	TOTAL
Lab Work	56%	3%	2%*	5%
X-Ray	21%	2%	2%	4%
Consultations	23%	2%	2%	4%
	100%	6%	5%	11%

_____

* As Compared to the Comptroller of the Army (CQA) Study of 25% (Released
in June 72).

SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
          System Pilot Project (Ireland Army Hospital)

        (1) This review considered only the last 5 visits of each
patient.

        (2) Twenty-two percent of the records had illegible documents
(total page) appearing with the top 3 documents of the record.

    f. Fifty "charge-out" cards were pulled and the staff and super-
visor attempted to locate and return them to the record room. Only
12, or 24%, could be found.

        (1) It took 2.6 minutes to search for each record.

        (2) Eighty-one percent of the records had been "charged-out"
over 11 days.

        (3) The only selection criteria was that each record selected
must have been out at least 3 days.

    g. A controlled study using 40% of the records file area was
conducted to determine the normal record return rate for one days
"charged-out" records.

        38% were returned the first day
        15% were returned the second day
        41% were returned within a 3-5 day period
         6% were returned within a 6-10 day period

    NOTE: Using this study, 62% of the records exceed the standards
set by your facility (100% returned within one day).

    h. A record return rate (within 24 hours) of 25 walk-in patients
revealed the following:

        80% were returned within 24 hours
        16% were sought and found (time/record 4.2 minutes)
         4% were considered lost

    NOTE: The time/record difference between the above and para-
graph g. above - 2.6 min/record - is explained by the number of records/
clinic sought.

MEDEW-ZHC   7 December 1972
SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
          System Pilot Project (Ireland Army Hospital)

    i. The success rate for pulling records for appointments was 86%.
There was an additional 3% "signed-out" to the same or another clinic.

    j. At the time of this study there were approximately 81,000 records
in the outpatient record section. This represents about 2 years and
9 months of records and there is sufficient shelving to accommodate the
remaining 3 months of 1972 generated records (4,000).

    k. The following information is provided to assist in establish-
ing data for staffing requirements (see also Incl 1, 2, 3, and 4):

        (1) Reception desk processing time for walk-in patients:
1.0 min/patient (average of 395/week day).

        (2) Record retrieval time for walk-in patients: 0.83 minutes
(included in k(1) above).

        (3) Appointment record pulling: 0.71 min/record (average of
324/week day).

        (4) Filing medical documents (lab, x-ray slips, etc.):
0.834 min/documents (average of 587/week day).

        (5) Filing medical records: 0.342 min/chart (average of
664/week day).

        (6) Making a new chart: 2.12 min/chart (average of 62/week
day).

        (7) Record search and retrieval time for signed out records:
2.6 min/record (average 415/week day with the current objective of
a 24 hour return). The current success rate is 24%. A directive to
return all charged out records should be issued to eliminate-initial
search and retrieval of the 900 records currently out.

        (8) Non-productive times, disruption, distraction, or idle
time factors were not considered in the productive work time measures
listed.

    l. A general observation of the medical records room would give
one the impression that a dedicated supervisor has produced one of the
best looking records file area existing in any military hospital.

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SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
          System Pilot Project (Ireland Army Hospital)

3. Recommendations.

    a. The following recommendations are proposed for implimentations
on or about 1 January 1973. The project officer has discussed these
matters with your staff and is available for consultation during the
preparation for and implimentation of the inovations.

        (1) Transfer the Medical Records Section from the Control of
the Registrar to the Cheef, Department of Clinics.

        (2) Establish adequate staffing for a 24 hr, 7 day a week
operation (see inclosures). Be prepared to provide 24 hour service
within the near future.

        (3) Develop a specific in-service training program to cover
an initial orientation, training, and periodic refresher training.

        (4) Establish a record charge-out and follow-up system
designed to meet your objectives (i.e., records returned within
24 hours).

        (5) Provide for a record transfer document to be used when
the medical record is moved from one clinic to another which should
include immediate notification of the Outpatient Record Section.

        (6) Provide outpatient recording cards to all active duty,
retired, and dependents.

        (7) Provide for proper identification on medical documents
for both patient, clinic, and doctor requistion test and record
custodian information.

        (8) Establish use of the new three part lab slips, routing
one to the physician, one to the medical record section, and one for
file.

        (9) Establish a staff messenger service to ensure among other
things a timely return of medical records from the clinics (reference
3a (4) above).

        (10) Provide for the installation of a telewriter system
between the walk-in clinic and pediatrics clinic and the outpatient
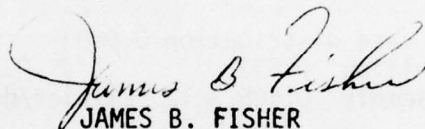
48

MEDEW-ZHC   7 December 1972
SUBJECT: Base Line Data Summary Report-Ambulatory Patient Records
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records section. Authorization for the rental of two receivers and
transmitters is approved and a fund cite will be forwarded under separate
cover.

    b. Upon implimentation of the above recommendations operating data
will again be gathered and compared with the baseline date listed in
para 2 above to prove the value of the above recommendations and the
effectiveness of your operational changes.

5 Incl   JAMES B. FISHER
as   LTC, MSC
                                    Project Officer
                                    Health Care Research Division

WORKLOAD COMPUTATIONS*
(Minutes)

Primary Task	Per Week Day

1. Reception Desk Processing

    Patient actions 0.828 min X 395 (Ave/day)=(327.06)
    Initial processing   0.134 ⎤
    Pull record   0.824 ⎬   1.008 X 395 (Ave/day)   398.164
    Final processing   0.050 ⎦

2. Appointment Processing

    Sign-out card distribution 0.060 ⎤
    Record pulling 0.653   ⎬ 0.713 X 324 (Ave/day)   231.012
    Final assembly 0.505 X 12 (Clinics/day)   6.060

3. Medical Document Filing

    Pre-sorting 0.046 ⎤
    Sequencing   0.066 ⎬   0.834 X 587 (Ave/day)   498.560
    Filing   0.722 ⎦

4. Medical Record Filing

    Pre-sorting 0.032 ⎤
    Sequencing   0.060 ⎬   0.342 X 664 (Ave/day)   226.940
    Filing   0.250 ⎦

5. Making New Charts

    Initial Record Assembly 1.683 ⎤
    Tape Terminal Digit   0.106 ⎬ 2.122 X 62 (Ave/day)   131.564
    Type Master Index Card   0.333 ⎦

6. Record Search & Retrieval

    Walk-in 395 plus appointments 324 X 62.6%*= 450
    450 X 0.34 (Total filing time)   153.030
    450 X 2.57 (Record search time)   1156.730

    * Percent that failed to meet desired time limits.

* Medical Records Section during weekday operations.

Incl 1

CURRENT WORKLOAD DISTRIBUTION*
(Percentage)

Primary Task	Week Day		Saturday
	0730-1630	1300-2100	0800-1200
Reception Desk Processing	98	2	100
Appointment Processing	25	75	
Medical Document Filing	100		
Medical Record Filing	100		
Making New Records	99	1	100
Record Search & Retrieval	100		100

* Medical records section supervisor's estimation.

CURRENT STAFFING GUIDE
(Work Distribution in minutes)

Primary Task	Per Week Day	
	0730-1630	1300-2100
1. Reception Desk Processing	391	8
2. Appointment Processing	60	178
3. Medical Document Filing	499	
4. Medical Record Filing	227	
5. Making New Records	131	2
6. Record Search & Retrieval	1310	
Total	2622	188
7. Other Duties (15%)	393	29
Total Working Time	3015	217

Computations

Non Productive Time (6%)	181	13
Total Time Involvement	3196	230
Man Hours (÷ 60)	53.27	3.83
Personnel (÷ 8)	6.66	.48
Leave Factor (.11%)	.73	.05
Personnel Requirements	7.39	.53
Shift Leaders	1	1
Supervisors	1	
Total Personnel Requirements	9	1

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PROPOSED 24 HOUR WORKLOAD DISTRIBUTION
(Percentage)

Primary Task	Week Day		Saturday
	0700-1500	1500-2300	2300-0700
Reception Desk Processing	80	15	5
Appointment Processing	100		
Medical Document Filing		30	70
Medical Record Filing	50	25	25
Making New Records	50	50	
Record Search & Retrieval	100		

NOTE: Weekend estimate is 10% of weekday workload.

Incl 4

Proposed 24 Hour Staffing Guide
(Work Distribution in Minutes)

Primary Task	Week Day Shift			Week End Shift*		
	7-3	3-11	11-7	7-3	3-11	11-7
1. Reception Desk Processing	319	60	20	32	6	2
2. Appointment Processing	238			24		
3. Medical Document Filing		150	350		15	35
4. Medical Record Filing	114	57	57	12	6	6
5. Making New Records	66	66		7	7	
6. Record Search & Retrieval	1310			131		
Total	2047	333	427	206	34	43
7. Other Duties (15%)	307	50	64	31	6	7
Total Working Time	2354	383	491	237	40	50
Computations						
Non-Productive Time (6%)	142	23	30	14	3	3
Total Time Involvement	2496	406	521	251	43	53
Man Hours (÷ 60)	41.60	6.76	8.68	4.18	.72	.88
Personnel (÷ 8)	5.20	.84	1.08	.52	.09	.11
Leave Factor (.11%)	.57	.09	.12	.06	.01	.02
Personnel Requirements	5.77	.93	1.20	.58	.10	.13
Shift Leaders	1	1	1	1	1	1
Supervisors	1					
Total Personnel Requirements	7	1	2	1	1	1
SUB TOTAL		10			3	
GRAND TOTAL			12			

* Estimate 10% of week day workload.

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Incl 5

APPENDIX B

SUBSEQUENT COMMUNICATIONS WITH PILOT STUDY
TEST SITES

DEPARTMENT OF THE ARMY
ACADEMY OF HEALTH SCIENCES, UNITED STATES ARMY
FORT SAM HOUSTON, TEXAS 78234

HSC-OP-PR   23 August 1974

SUBJECT: Ambulatory Patient Medical Records System Pilot Project

Commander
Brooke Army Medical Center
Fort Sam Houston, TX 78234

1. Attached as inclosure one is the revised study plan to subject project approved by this headquarters. This project is an ongoing study conducted by the Health Care Studies Division, Academy of Health Sciences, US Army, Fort Sam Houston, TX, for which your medical treatment facility and Ireland Army Hospital, Fort Knox, KY, are the study sites. The study began in September 1972. The closing date of the study phase, after minor changes to the original plan and rephasing of the improvement actions, has been advanced to 31 July 1975. Funds indicated in the inclosed revised study plan are available through the Health Care Studies Division, Academy of Health Sciences, US Army.

2. It is requested that your facility take appropriate action for timely implementation of the improvement actions outlined in para 3a on page eight of the revised study plan. The required specific actions and time frames for your facility are as follows:

    a. Step #1. Distribution of the Three-part Laboratory Slip. (To be implemented by 30 September 1974.) One copy (the original, except for culture series) of every laboratory analysis slip will be sent directly to the outpatient records custodian. For ward patients and troop clinics, local policy may determine the distribution of the second and third copies. This procedure is advocated as the result of 38 percent to 57 percent of requested laboratory analysis results being missing from the outpatient medical records. Routing the medical record file copy of the laboratory analysis slip first to the requesting clinic has resulted in the copy frequently never reaching the medical record.

    b. Step #2. Provide Embossed Patient Cards to All Personnel. (To be implemented no later than 30 September 1974.) It is recommended that the issuance of patient cards be made a part of the in-processing procedure for permanent party personnel and their dependents. Patient cards for trainees and students will be at the discretion of the commander. Each patient card will identify your medical training facility and the records custodian (e.g., 02-TMC3 or 02-MH) in the spaces

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COPY

HSC-OP-PR
SUBJECT: Ambulatory Patent Medical Records System Pilot Project

furtherest to the right on line two. See Health Services Command Ambulatory Patient Care revised Model #5 and Table B-3, AR 40-400.

c. Step #3. Increase the Number of Medical Records Clerks. (To be implemented no later than 31 December 1974.) Hire eleven temporary civilian employees as follows:

(1) Supervisory Medical Record Technician (GS-7) to work out of the office of the Chief, Administrative Support Branch, Department of Clinics and Community Health Care Services (CHCS). This individual would have the responsibility of seeing that the improvement actions of the subject project are fully implemented and perform audits using the management indicators of effectiveness (see Step #11).

(2) Messenger (GS-3) to operate directly out of the office of the Chief, Administrative Support Branch, Department of Clinics and CHCS (see Step #8).

(3) A full-time Medical Records Suspense and Locator Clerk (GS-3) working in the main hospital medical records room. The duties would be to monitor the location of charged out records and to maintain a suspense on such records. A daily list of unretrievable records would be furnished the supervisor (see Step #9).

(4) A nominal, alpha-numerical Cross Reference File Clerk (GS-3) (see para 1571, Section XVIII, AR 40-3, Change 14).

(5) Seven medical records clerks (GS-3s) to support the workload in the medical records rooms.

(6) Unofficial communication between the Budget Officer, Office of the Comptroller, this headquarters, and the Office of the Comptroller, your facility, in June 1974 indicated sufficient FY 1975 funds are available within your annual operating budget for the above temporary civilian hire. If any problems develop in complying with this request this headquarters will be notified.

d. Step #4. Increase the Caliber, i.e., Grade, as well as Quantity of Medical Records Personnel. (To be implemented no later than 31 December 1974.) Every attempt will be made to increase the grade structure.

e. Step #5. Institute Specific Inservice Training of Medical Records Clerks. (To be implemented by 31 December 1974.) Health Services Command Ambulatory Patient Care Model #4 outlines a step-by-step procedure regarding inservice training of medical records personnel.

f. Step #6. Emphasize Positive Identity of Doctor and Clinic

Ordering Diagnostic Tests and Location of the Medical Records Custodian
on Report Forms. (To be implemented by 31 December 1974.) A prac-
tical method of identifying the clinic ordering diagnostic results
would be to permanently insert the clinic name in the imprinting
machines so that when a patient paper is used the clinic would also be
registered on the document (laboratory slip, clinical record sheet, etc.).

g. Step #7. File the Military Health Records on Open Shelves,
Without Regard to Organizational Units. (To be implemented by 31 March
1975.) Military Health Records will be filed in a block without regard
to organizational units (see para 2-4b, AR 40-403). Exceptions may be
made with regard to trainees and students. A file guide system and
charge out folder similar to the outpatient record system is recommended.

h. Step #8. Establish a Messenger Service Operating Directly Out
of the Office of the Chief, Department of Clinics and CHCS. (To be im-
plemented by 31 March 1975.) This messenger should be a qualified medi-
cal records clerk and should assist in all possible ways to prevent
lost records and diagnostic papers, and assist in all ways to retrieve
medical and health records and diagnostic papers so that the physician
has a complete medical record each time he has a patient visit.

i. Step #9. Develop a Record Locator System with Record Locator
Clerks at Each Record Maintenance Location. (To be implemented by 31
March 1975.) Among other record locator duties, this clerk would work
with the messenger to assure 100 percent availability of records to
the physician or health care provider for each patient visit. It is
emphasized that a locator clerk be established at the troop medical
clinics as well as at the main hospital and pediatric medical records
rooms.

j. Step #10. Identify or Color Code Health Records as to Proper
Custodian. (To be implemented by 31 March 1975.)

k. Step #11. Use the Project Measures of Effectiveness and Effi-
ciency as Management Indicators for Local Management., (To be imple-
mented by 31 March 1975.) It is recommended that the Chief, Department
of Clinics and CHCS be appointed to assure that management indicators of
effectiveness in para 1b(4), pages 4, 5, and 6 of the Study Proposal
(Revision II) inclosed, will be used quarterly to monitor the effective-
ness of the medical records quality and availability. Paragraphs 2 and
3 of Progress Report II, September 1973, show methodology and findings
of test results conducted by the project investigator.

1. Step #12. Provide for a Strict, Thorough Periodic Medical
Audit of Ambulatory Patient Medical Records. (To be implemented by
31 March 1975.) The indicated medical audit of ambulatory patient medi-

HSC-OP-PR
SUBJECT: Ambulatory Patient Medical Records System Pilot Project

cal records is specifically referred to in para 10-10 and 10-11 of AR
40-400 and more generally in Standard 7I, Outpatient Services, in the
manual of the Joint Commission on Accreditation of Hospitals. The
period of medical audit should be monthly and of a sufficient sample
size of the active records to assure 95 percent reliability annually.

   m. Step #13. Improve the Work Environment for Medical Records
Personnel of All Records Rooms. (Desirable but not mandatory. To be
implemented by 31 March 1975.) Applies equally to troop clinics.

3. It is requested a primary and secondary project officer be desig-
nated at your facility to see that the proposals of the study plan are
implemented as soon as possible, but not later than the scheduled
quarters in the plan. The names of these officers will be furnished
to the Health Care Studies Division, Academy of Health Sciences, US
Army, Fort Sam Houston, TX 78234. Additionally, a quarterly progress
report on the implementation of the improvement steps will be furnished
the above institution. The study investigators at that office are Mr.
Wayne R. Gallentine, DAC, and LTC James A. Hubbart, MSC, Telephone
221-4341/3331. Direct communication, both formally and informally, is
authorized and encouraged.

4. It is again emphasized that funds indicated in the study plan for
the purposes indicated will be provided by the Academy as soon as your
facility can determine a firm program and specific amounts. Funds for
hire of civilian temporary employees are to be financed from funds
locally available to your facility as indicated in paragraph 3c above.

5. The successful completion of this project as scheduled will un-
doubtedly improve outpatient medical records management at your facility.
More importantly it will provide objective information which can re-
sult in similar improvements throughout the AMEDD.

FOR THE COMMANDER:

1 Incl   L. J. EASON
as   MAJ, MSC
                                Adjutant

CF:
Supt, AHS wo incl

C O P Y

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MEDEW   4 October 1974

SUBJECT: Ambulatory Patient Medical Records System Pilot Project

Commander
US Army Health Services Command
ATTN: HSC-OP-PR
Fort Sam Houston, Texas   78234

1. A review of the Ambulatory Patient Medical Records System Pilot
Project discloses a conflict which relates to the requirements out-
lined in para 2c of HSC letter, subject as above, dated 23 August
1974. The hiring of eleven (11) temporary civilian employees in
support of this program is not within the funding or manyears
limitation authorized Brooke Army Medical Center. The condition
referred to in para 2c(6) of HSC letter is no longer true since,
as stated in previous correspondence addressing funding and personnel
authorizations, BAMC must of necessity drop well below the authorized
year end strength in order not to exceed the funded manyears. Adding
these additional personnel will result in an even greater reduction-
in-force as attrition alone cannot bring us down sufficiently low.

2. Implementation of steps 1, 2 and 6 will proceed; however, the
remainder of the pilot project cannot be accomplished without funding
relief. I am deeply interested in seeing this project succeed because
of the grossly unsatisfactory condition of outpatient medical records,
and I am anxious for BAMC to be a part of it. If the necessary re-
sources are made available, we are prepared to give full support to
the study. If this cannot be accomplished, guidance is requested as
to which activity should be curtailed to provide a trade-off.

                              FLOYD W. BAKER, M.D.
                              Brigadier General, MC
                              Commanding

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DEPARTMENT OF THE ARMY
US ARMY MEDICAL DEPARTMENT ACTIVITY
Fort Knox, Kentucky 40121

ATZK-MD-DC-R   29 September 1975
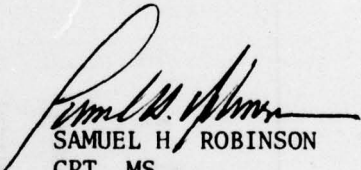
SUBJECT: Ambulatory Patient Medical Records System Pilot Project Quarterly
          Report (4th Qtr, FY 75)

~~Superintendent~~ HQ, HSC
~~Academy of Health~~ Sciences
~~ATTN: HSC-OP-PR~~ G1
Fort Sam Houston, Texas 78234

Forwarded herewith is Ambulatory Patient Medical Records System Pilot
Project Quarterly Report as required.

FOR THE COMMANDER:

SAMUEL H. ROBINSON
CPT, MS
Adjutant

AMBULATORY PATIENT MEDICAL RECORDS SYSTEM PILOT PROJECT

TO: HSC-OP-PR
FROM: Ireland Army Hospital, Ft Knox, KY
HOSPITAL PROJECT CONTACT: MAJ Moore or CPT Ristaino, Autovon 464-1513

DATE: 29 September 1975
REPORTING PERIOD: 4th Qtr, FY '75

TYPE ACTION/SUB PARA #-ACTION PLANNED	CURRENT STATUS
1. THREE PART LABORATORY SLIP	
2a Step #1. Distribution of lab slip	Already completed.
2. EMBOSSED PATIENT CARDS	
2b Step #2. (1) Provide to all personnel	Already completed.
(2) Identification of Medical Records Custodian	Already completed.
(3) Social Security Number in large print	Already completed.
(4) Two Medical Recording Cards are now being made. One card is put in the medical records and one is given to the patient.	Effective 22 September 1975.
3. MEDICAL RECORDS CLERKS	
2c Step #3. Increase number of clerks	At the present time, all of our slots are filled with permanent personnel. We no longer have any temporary hire.

2

TYPE ACTION/SUB PARA #-ACTION PLANNED   CURRENT STATUS

2c(1) Hiring of Supervisory Medical Records   Due to imposed ceiling restraints and budget
       Technician   limitations, action is not possible at this
                                                      time.

4. INCREASE OF MEDICAL RECORDS PERSONNEL

    2d   Step #4. Increase grade and quality of   All the job descriptions have again been
           Medical Records Personnel   rewritten for a grade increase and we are
                                                      waiting for the jobs to be reaudited. The
                                                      only grade increase in the Record Room was
                                                      the promotion of the supervisor to GS-6.

5. TRAINING OF MEDICAL RECORDS CLERKS

    2e   Step #5. Institute specific inservice   Already completed.
           training of Medical Records Clerks

6. RECORD LOCATOR SYSTEM

    2i   Step #9. Develop Record Locator Clerk   The Record Room now has a Medical Records
                                                      Locator Clerk.

7. WORK ENVIRONMENT FOR MEDICAL RECORDS PERSONNEL

    2m   Step #13. Improvement of work   Have received air-conditioning, lighting,
            environment   pictures, 1 desk, 3 chairs, 2 potted plants,
                                                      and 2 Farrington Electric Cardwriters.
                                                      Still have not received carpeting for Record
                                                      Room.

3

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APPENDIX C

METHODOLOGY FOR ESTABLISHING A
COLOR CODED CHARGE-OUT
FOLDER SYSTEM

APPENDIX C

METHODOLOGY FOR DEVELOPMENT OF A COLOR
CODED CHARGE-OUT FOLDER SYSTEM

1. For those medical treatment facilities that plan to develop a color coded charge-out folder system the following guidance is provided:

a. Charge-out folders with the dimensions (Figure 1 to Appendix C) and meeting the written specifications (Exhibit 1 to Appendix C) should be procured.

b. It is recommended that only three working colors be utilized, with the following color sequence suggested:

Monday and Thursday: Yellow

Tuesday and Friday: Red

Wednesday, Saturday, and Sunday: Green

c. In addition to the three working colors, two other colors (black for overdue records and white for authorized retention) are suggested.

2. The recommended procedures are as follows:

a. After having used yellow on one day, followed by red the next day, and then by green; the medical records filing personnel will, on the afternoon of the day green is used replace with black all the yellow folders remaining in the files. A list will be made for all overdue black folders. This medical record identifying information will be turned in daily to the medical records supervisor.

b. A follow-up system will then be devised to retrieve the records represented by the black charge-out folders in the files.

c. The white charge-out folder will only be used with approval of the medical records custodian. This white out-folder is intended for use only in extraordinary cases where authorization is granted for retention of a record beyond the three day period.
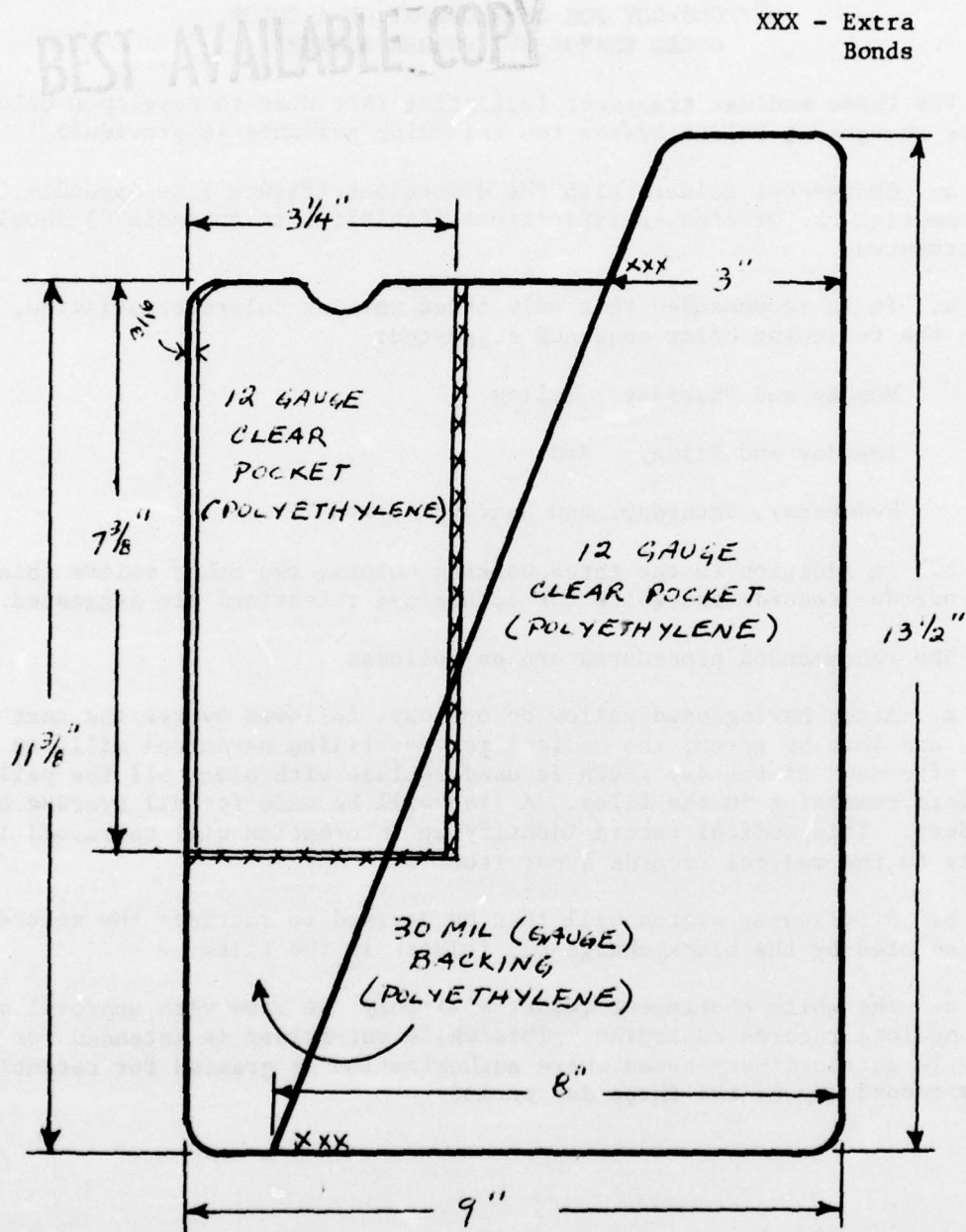
65

DIAGRAM OF MEDICAL RECORDS CHARGE-OUT FOLDER

XXX - Extra
Bonds

Figure 1, Appendix C
(See Exhibit 1, Appendix C, for Specifications)

SPECIFICATIONS FOR MEDICAL RECORDS CHARGE-OUT FOLDERS

Medical Record out folder, polyethylene, opaque colored 30 Mil (GA) backing, with 12 GA clear document holder and 12 GA clear card holder with the following features and dimensions:

1. Medical document holder, with large pocket to hold large documents, size 11" x 8 1/2" and small pocket to hold data processing cards, 3 1/4" x 7 3/8".

2. Material for the backing to be opaque colored (various colors) modified polyethylene, 30 mil (GA) to completely back all characteristics of the design of the folder. Material for both pockets to be 12 GA clear polyethylene.

3. Outside Dimensions: top 11 3/8", bottom 13 1/2", and height 9". Bottom side contains 2 1/8" protrusion (tab in lower righthand corner) (tab is also covered with 12 GA material).

4. Pockets.

   a. Large document holder to run diagonally 1" from top left corner to 6" from top right corner.

   b. Large holder to be closed on 3 sides; opens only on the diagonally cut top. Bond on right side to be formed at beginning of protrusion (tab). Length of opening: approximately 12-3/8".

   c. The small (card) holder to be placed in the upper right hand corner, with thumb index on right side. To accommodate data processing cards, size 3 1/4 x 7 3/8, bonded on 2 sides (left and bottom); outer dimensions of holder: 3 7/16 x 7 9/16. To be positioned 3/16" from top side so card will be positioned 1/8" below top side and adjacent to right side.

5. All outer (exterior) corners to be rounded.

6. Source: Grady Co., 440 Country Club Road, Crystal Lake, IL 60014, phone 815-459-1025.

Exhibit 1, Appendix C

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